TEXAS RECYCLER TNRCC

Market News

Texas Natural Resource Conservation Commission, Recycling Market Development Program

What Affects Plastic Markets?

This article is the first in a series on plastics recycling.

The success of plastics recycling, as with any recyclable material, is dependent on successful marketing of the materials. Understanding what affects the markets helps meet the needs and requirements of the marketplace, and ensures a successful plastics recycling program.

The Plastics Recycling Market System has four basic elements:

Haulers or collectors often collect plastics along with other recyclables. If a hauler will accept plastics for recycling, this will be the easiest method for recycling; however, the program will be dependent on the markets that the hauler can locate.

Handlers generally receive plastics in loose form and densify plastics through baling or granulating. The handler usually performs the initial sort of mixed or commingled plastics. Sorting and densifying are the first steps in adding value to post-consumer material.

Reclaimers may purchase loose, ground, or baled plastics; generally, reclaimers wash the plastic or otherwise prepare the material for sale as a raw material feedstock to an end-product manufacturer.

End markets convert recycled plastics into new products. They use recycled plastic in a finished form, such as clean pellets or washed and ground flake. The specific products made by end markets dictate the quality requirements and prices for that specific plastic market. These requirements are passed back through the chain of reclaimers, handlers, and haulers to dictate the quality requirements at each step in the plastics recycling process. Many end markets have such high quality requirements that they must rely on virgin plastics for their products. Others rely exclusively on recycled plastics, but most use a combination of virgin and recycled materials or switch from one to the other, depending on price, availability, and quality.

Hierarchy of Plastics Feedstocks – In the range of options for plastics feedstocks, virgin plastics are typically the highest quality, value, and price. Virgin plastic is first sold as pellets or flake, and that is the final form that most recycled plastics must be converted into for use by end markets. Next in the range of options are "wide spec.", or "off-spec." plastics. These are virgin plastics that do not meet the high quality and performance specifications required of virgin plastics and are often generated by plastic manufacturing facilities during start-up periods. These plastics are lower in price than virgin plastics that meet specifications. They compete in the marketplace with recycled plastics because they are both less expensive and of acceptable quality for manufacturing processes of moderate quality requirements.

This "hierarchy" of plastics available to the marketplace can create a chain reaction of price changes, all related to the pricing and availability of each type of plastic supply. Because virgin plastics are manufactured from petroleum distillates and natural gas, their price is subject to the price changes of oil and natural gas. If oil prices decrease, lowering the cost of virgin plastics, the pricing of off-spec. virgin plastics and recycled plastics will be forced lower as well. An overabundance of any of the plastics will tend to lower not only their prices but also the prices of all the plastics materials that are lower in the marketplace hierarchy.

As with most commodities, supply factors are a major influence on pricing and explain why recycled plastics markets can vary in price so dramatically.

Used Oil Recycling

In an effort to reduce oil-related environmental pollution, the Texas Legislature banned the landfilling and dumping of used oil in 1991 and created a state used oil recycling program. The TNRCC developed a program to encourage voluntary used oil collection and recycling programs by local governments and private businesses.

Household do-it-yourself oil changers generate an estimated 16.7 million gallons of used oil in Texas annually. It is estimated that over 60 percent of do-it-yourselfers improperly dispose of their used oil in sewers, onto the ground, or into household trash. Recycling used oil can conserve our nation's natural resources, protect the environment and save consumers money. However, when improperly disposed, used oil can contaminate the soil, and surface and ground waters.

Oil doesn't wear out; it just gets dirty. Through re-refining, used oil can be used over and over without losing its lubricating quality. Only one gallon of used oil is needed to produce two quarts of lubricating oil, whereas 42 gallons of crude oil would be needed for the same two quarts of oil. Re-refining used oil takes 70 percent less energy than refining crude oil. Plus, the waste by-products and remaining oil from the re-refining process can be used as asphalt extender and fuel oil. Most used oil is reprocessed into industrial grade fuel oil. Used oil can also be used to produce diesel fuels, greases, and other lubricants.

As of August 1996 the TNRCC's Used Oil & Used Oil Filter Recycling Program has registered more than 2,400 used oil collection centers. A total of 4.5 million gallons of used oil was collected by registered collection centers in 1995.

For more information, please contact the TNRCC Used Oil & Used Oil Filter Recycling Program at (512) 239-6695 or check the Internet home page at http://www.tnrcc.state.tx.us.

Spotlight on: Chaparral Steel

Chaparral Steel Company, located in Midlothian, owns and operates a technologically advanced steel mill that produces bar and structural steel products by recycling scrap steel. The plant commenced operations in 1975 and more than doubled in capacity in 1982. Today, the company employs a workforce of more than 1,000, making it one of the largest recycling manufacturing operations in Texas. The company now has two electric arc furnaces with continuous casters, a bar mill, structural mill and a large beam mill that enable it to produce a broader array of steel products than traditional mini mills. Products are sold principally to the construction industry and to the railroad, defense, automotive, mobile home, and energy industries.

Chaparral Steel recycles 1,750,000 tons of scrap annually and capacity is expected to increase by approximately 100,000 tons in the next year. The company's shredder operation processes more than 700,000 tons of old cars and light scrap, making this the largest and most productive shredding operation in the world. For more information, contact Lhea Saylors, Buyer/Raw Materials at (972) 799-1032.

Texas Market Prices

(for the week of October 21, 1996)

Material		Processor Price	End-User Price
Aluminum	UBC *(cans)*	$0.20 - 0.38/lb ↓	$0.49 - .53/lb –
Glass	Flint	0 - 20/ton –	50 - 57/ton –
	Amber	0 - 15/ton –	40 - 59/ton –
	Green	0/ton –	15/ton –
Paper	OCC *(cardboard)*	10 - 50/ton –	60 - 75/ton –
	ONP *(newspaper)*	0 - 10/ton –	15 - 35/ton –
	White Ledger	30 - 60/ton –	100 - 150/ton –
	Mixed Paper	0 - 4/ton –	10 - 15/ton –
	Mixed Office Ledger	10 - 30/ton –	40 - 80/ton –
	Computer Print-out	60 - 120/ton –	200 - 220/ton –
Plastic	PET *(mixed colors)*	0 –	0.01 - 0.04/lb ↓
	HDPE *(natural)*	0 –	0.165 - 0.175/lb ↑
	HDPE *(mixed colors)*	0 –	0.06 - 0.09/lb –
Steel	Steel Cans	0 - 40/ton ↑	88/ton ↓

The prices listed above are compiled by the TNRCC Recycling Market Development Program and are for reference only. These prices are not firm quotes. TNRCC obtained pricing information from buyers within each category and developed a pricing range. "Processors" include dealers, brokers, scrap yards and collection centers; whereas, "end-users" include mills and plants. Processor prices are for delivered material in metropolitan areas of the state and do not reflect the value of any collection services. End-user prices, except for glass, are for baled material in truckload quantity, f.o.b. seller's dock. The difference between processor and end-user prices is indicative of the value added by separating, baling or otherwise preparing materials to meet end-market specifications. Actual prices paid by end-users will depend on quality, quantity and transportation requirements. Arrows indicate direction of change from previous month.

ETC....the city of **Dallas** is expanding its blue-bag recycling program. In September, 45,000 households were added to the program and 40,000 more households will be added in November and January; the city will collect newspaper, plastic bottles (#1-3), steel and aluminum cans from more than **225,000 households**. A bid for the processing contract is now being issued. For additional information, contact **John Elliot**, Contracts Manager at (214) 670-3779...**Anchor Glass** recently declared bankruptcy and its parent company, Mexico-based **Vitro, S.A.**, is trying to sell Anchor's 14 glass plants, including one in **Houston**. Vitro had considered closing the Houston operation last year, but the plant has remained open...The **General Land Office** is continuing its series of **Buy Recycled** community workshops around the state. The next workshops are scheduled in **McAllen** on November 15 and in **Corpus Christi** during January. For additional information, call (800) 367-8272...**The Road to Recycling Conference** will be held in Austin on January 28 and 29. The conference will focus on the use of recycled materials in a variety of road construction applications. For additional information, call (512) 416-2562...

Market News is produced by the TNRCC Recycling Market Development Program. For more information about items in this newsletter, contact the Market Development Team at 512/239-6750, Fax 512/239-6763, or at ccollins@tnrcc.state.tx.us.

Market News Subscription Information

The most valuable tool for market development is good information. It's also the most cost effective. The TNRCC's Recycling Market Development Program publishes Market News, a free monthly newsletter dedicated to bringing you the latest and best information available on markets for recovered materials.

Each month, Market News features articles about specific materials, highlighting individual market success stories and keeping you abreast of market trends. The Recycling Market Development staff want this publication to be truly useful, so don't hesitate to call them at 512/239-6750 with your suggestions and items of interest.

If you would like to receive future copies of Market News, please complete this coupon and fax to **512/239-6763** or mail to:

Recycling Section/MC 114, Attn: Heidi Wittenborn,
Texas Natural Resource Conservation Commission, P.O. Box 13087, Austin, Texas 78711-3087

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